Nevada Division of Environmental Protection
Chemical Accident Prevention Program
Data Form: Mechanical Integrity

1. Is there a Mechanical Integrity Program Procedure?

Title:	Revision & Date:

2. Has a list of equipment, piping & instruments been developed? Was it reviewed to ensure that necessary preventative maintenance activity as defined by vendors and good engineering practice is being done?

3a. Types of preventative maintenance identified. Check any that apply.

Type of Preventative Maintenance	Corrosion/Erosion Monitoring	Other Monitoring	Calibration	Function Testing	Part Replacement or Rebuild	Total Replacement	
Pressure Vessels & Storage Tanks							
Piping Systems							
Pressure Relief Devices							
Pressure Relief Systems							
Scrubber Systems							
Building Ventilation Systems *(if CAPP process inside)*							
Emergency Shutdown Systems							
Instrumentation							
Sensors *(toxic/combustible gas, flame)*							
Alarm Systems							
Pumps							
Compressors							
Other Rotating Equipment							

3b. Questions to consider while developing the PM list and schedule *(response to these questions on this form is not required)*:

a. Is wall thickness monitored for all pressure vessels and storage tanks (operating in excess of 15 psi), and does the frequency of monitoring consider historical wall loss or the potential for corrosion or erosion in the system?

b. Is wall thickness monitored for all vessels and storage tanks (operating at 15 psi or less), and does the frequency of monitoring consider historical wall loss or the potential for corrosion or erosion in the system?

c. If internal inspection or hydrostatic pressure testing of pressure vessels and storage tanks operating in excess of 15 psi is required by Nevada OSHES, under NAC 618.010 through 618.340, is it being completed as mandated?

d. Is wall thickness monitored for all process piping (where failure could result in the release of toxic gas, or a fire or explosion) and does the frequency of monitoring consider historical wall loss or the potential for corrosion or erosion in the system?

e. Are all pressure relief devices recertified or changed-out on a periodic basis, which includes verifying the set pressure, and is the recertification conducted by a nationally recognized code shop when required?

f. If the recertification of the pressure relief device is required by Nevada OSHES, under NAC 618.010 through 618.340, is it being recertified as mandated?

g. If the recertification of the pressure relief device is not mandated by Nevada OSHES, is it being recertified pursuant to other nationally recognized codes & standards, vendor recommendations, industry recommendations or operating experience?

h. Are flares & ignitors maintained in a manner and frequency consistent with vendor recommendations or industry recommendations or operating experience?

i. Have scrubber components been evaluated for inspection type and frequency, and are the components being maintained adequately? If the scrubber vendor recommends more stringent maintenance activities or schedule, is this being maintained?

j. Are emergency shutdown system circuits checked for continuity, and are system components checked for operability on some frequency? Are system components maintained pursuant to vendor recommendations, industry recommendations or on a frequency and criteria based upon operating experience?

k. Are critical process instruments, controls and analyzers calibrated and maintained pursuant to vendor recommendations, industry recommendations or on a frequency and criteria based upon operating experience?

l. Are pumps, compressors, blowers and other rotating equipment maintained pursuant to vendor recommendations, industry recommendations, or on a frequency and criteria based upon operating experience?

4. Source of maintenance requirements and procedures. Check any that apply for each type of equipment or instrumentation.

Source of Maintenance Procedures	Vendor O&M Manuals	Codes & Standards	Industry Recommended Practice	Facility Experience			
Pressure Vessels & Storage Tanks							
Piping Systems							
Pressure Relief Devices							
Pressure Relief Systems							
Scrubber Systems							
Building Ventilation Systems *(if CAPP process inside)*							
Emergency Shutdown Systems							
Instrumentation							
Sensors *(toxic/combustible gas, flame)*							
Alarm Systems							
Pumps							
Compressors							
Other Rotating Equipment							

5. Is a work order system used to schedule and track preventative and corrective maintenance activities?

6. Types of training provided to maintenance personnel. Check any that apply for each position listed below.

Type of Training *(Below, list different maintenance positions including mechanical, instrument & electrical)*	Preventative Maintenance Procedures	Corrective Maintenance Procedures	Safe Work Practices	Overview of Process	Management of Change	Other	

7. What system is in place to ensure the compatibility of new components and spare parts with the process?

8. What system is in place to ensure that equipment, instrumentation and electrical components are installed per design specifications and vendor requirements?